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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,387	02/15/2002	Jay H. McCandless	HAR66 816 CONT	9309

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12/02/2003

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EXAMINER

WIMER, MICHAEL C

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,387

Applicant(s)

MCCANDLESS ET AL.

Examiner

Michael C. Wimer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 60-62, 69-82, 89 and 90 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 69-82 is/are allowed.
- 6) ☒ Claim(s) 60-62, 89 and 90 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 60, 62, 89 and 90 are rejected under 35 U.S.C. 102(b) as being anticipated by Seling (2975383).

Regarding Claims 60 and 62, Seling shows and teaches in Figures 13 and 4, a coupler for coupling a signal through a first waveguide 14 configured for a first polarization and a second wave guide 16 configured for a second polarization comprising a plate 26 of a thickness of a quarter wavelength (see col. 2, lines 20-22) along a longitudinal axis and an aperture "configured" for a polarization different from both polarizations and is defined within two parallel side walls symmetric about a plane oblique to the polarizations. Note: the aperture is of a cross-shape. The slot structure is symmetrical to a plane oblique to the cross, e.g., the plane defined by the probes 36, 38. The slot is "configured" as claimed because it allows the orthogonal polarizations to propagate and defines a propagation at 45 degrees to those polarizations and sustains it within. The polarization of the coupler is "at the midpoint" of (or 45 degrees to) the polarization difference as claimed in Claim 62.

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Regarding Claim 89, Seling teaches a polarization plate 26 for a signal having a wave length and one of two orthogonal polarizations (as illustrated in Figures 3 and 4) and shows in Figure 1, a waveguide 26 having a length of approximately one quarter wavelength (col. 2, lines 20-22), the physical configuration of the waveguide being associated with a polarization midway between the two polarizations, wherein the physical configuration of the waveguide includes a continuous unobstructed aperture. Note that the physical configuration of the waveguide is such that the polarization that is midway between the two is propagated (shown in Figures 3 and 4 extending between the probes 36,38). Note: the probes are not deemed an obstruction, wherein the waveguide 26 is not obstructed, because the probes help to define the polarization between the other two polarizations, and that polarization is allowed to propagate through the plate waveguide 26. Therefore, Seling anticipates all language of Claim 89.

Regarding Claim 90, Seling shows and teaches a waveguide system for a signal having a predetermined wavelength comprising a first waveguide physically configured for a signal having one of two orthogonal polarizations, and a second physically configured for a signal having one of the same two orthogonal polarizations; and, a polarization plate intermediate the first and second waveguides and having a thickness of a quarter wavelength (col. 2, lines 20-22) and a slot intermediate the two orthogonal polarizations (the slot formed between the probes that allow the intermediate polarization to be defined, or "induces

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rotation of the plane of polarization", as set forth by Seling), and the slot extends to each of the waveguides along a longitudinal axis.

Note: since there is a cross-shaped slot with probes diagonally formed therein, the slot is deemed to be formed as claimed, simply because the claimed polarization is defined therein and allowed to propagate.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seling. Regarding Claim 61, since Seling shows a symmetrical, cross-shaped slot, it would have been obvious to the skilled artisan to bolt-on the waveguides 14, 16 and their associated plates/lateral flanges 20, 24, comprising four mounting holes therein, in order to obtain any desired polarization. The flanges will bolt-on to the plate 26 because the slot is symmetrical, as claimed. Such mounting produces the same polarization at entry and exit, and is shown to be obvious.

Response to Arguments

5. Applicant's arguments filed August 08, 2003 have been fully considered but they are not persuasive. Specifically, although applicant has amended the claims, they are not deemed to define over the art of Seling because of the arrangement of the cross-

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shaped slot and the portion within the waveguide section/plate thereof, where the probes induce rotation of the plane of the polarization passing therethrough. The aperture as a whole defines a cross shape within the outer walls of the plate/waveguide portion. However, the slot also contains a portion where the probes exist, that arranges the polarization passing through to be 45 degrees to the entering and exiting polarizations. A plane passing in an oblique manner to the cross shaped slot defines the slot as symmetrical thereabout. The language intended unfortunately does not define over the prior art of Seling. The slot is not properly characterized in the plate/waveguide in order to patentably define over Seling. The anticipation rejection stands.

Allowable Subject Matter

6. Claim 69-82 are allowed.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

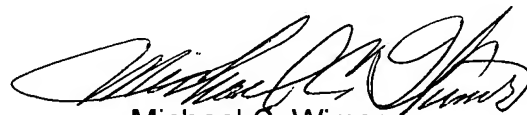
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (703) 305-3555. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on (703) 308-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Michael C. Wimer
Primary Examiner
Art Unit 2821

MCW
11/18/2003